

Application No. 10/766,505
Response dated December 5, 2006
Reply to Office Action of July 6, 2006

Remarks:

Applicant thanks the Examiner for the courtesy of the telephone interviews afforded his counsel on December 1 and December 4, 2006. In those interviews, the Examiner's concern that the language in the claims of a "serpentine" path still could be interpreted to cover a simple spiral antenna configuration, and not necessarily one having a "sinuous" configuration that curves back and forth as Applicant contended. Applicant's counsel proposed to add the adjective "sinuous" to clarify the intended meaning of the claim. The Examiner suggested instead that additional language express the feature in terms of the physical features, such as the edges or cutouts that define the conductive path of the shape that Applicant claims.

Claim 25 is being amended to incorporate geometric features discussed in [0039] to show the aspects of the cutouts in the edges that produce the "serpentine" path claimed by Applicant. Paragraph [0039] states:

"The shapes of the segments 21-23 are defined by cut-outs 30 (**Fig. 1A**), thereby creating a sequence of higher and lower aspect ratio conductor sections 31-35, and forming gaps 36 and 37 that interrupt the shortest paths for RF current to flow through the element 20a. In this fashion, inductive loops 40 are generated where increased RF current density occurs, thus causing stronger RF magnetic fields to couple locally through the window 16a and into the vacuum chamber 12. "

If cutouts extend in far enough inwardly from the outer edge of the sheet to interrupt the shortest current paths around the cutouts that extend outward from the inner edge, then the current must path must curve outwardly around the cutouts in the outer edge. Similarly, if cutouts extend in far enough outwardly from the inner edge of the sheet to interrupt the shortest current paths around the cutouts that extend inwardly from the outer edge, then the current must path must curve inwardly around the cutouts in the outer edge. With plural cutouts in both edges alternating around the conductor, the path must necessarily curve in and out and in and out, or oscillate in a sinuous serpentine manner that is not characteristic of a simple spiral. The electrical significance of this is that field lines become closer together on the inside of each curve in the current path, and farther

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apart on the outside of each curve in the current path. This and the cross-sectional conductor area variations combine to concentrate energy in segmented power distribution.

Applicant's amendments to claim 25 combine geometric and functional language in a way that makes clear the differences between the present invention as claimed and the prior art as evidenced by Coultas et al. U.S. Patent No. 5,304,279. Further, as set forth in the previous submission, applicant's intended meaning of the word "serpentine" is consistent with at least most dictionary meanings. Accordingly, claim 25 should be interpreted as having the plurality of alternating opposite curves that is not present in the prior art. The rejection of claims 25-27 under 35 U.S.C. §102(b) Coultas et al. should be withdrawn.

It is submitted that the application is in condition for allowance. An early allowance is respectfully requested. If the Examiner finds any errors in the claims, it is requested that she call the counsel identified below to resolve the errors.

If any charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

BY /Joseph R. Jordan/
Joseph R. Jordan, Reg. No. 25,686

2700 Carew Tower
Cincinnati, OH 45202
(513) 241-2324
(513) 241-6234 (Facsimile)